

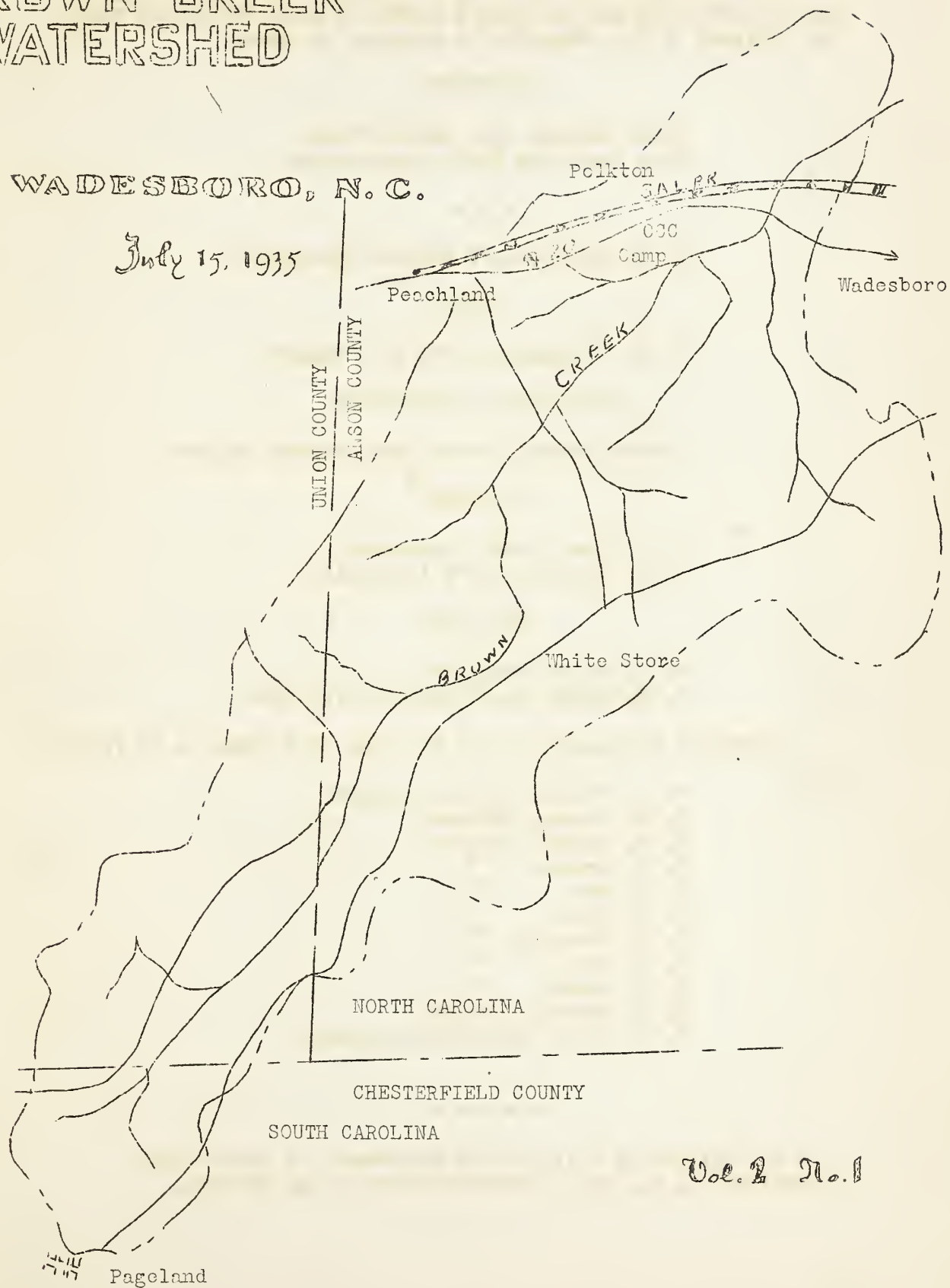
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THE BROWN CREEK WATERSHED

WADESBORO, N. C.

July 15, 1935



Vol. 2 No. 1

THE BROWN CREEK WATERSHED is being put out by the Soil Conservation Staff once each month, mainly to assist in telling what we are doing and maintain a spirit of good fellowship with the citizens of the community to endeavor to serve.

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Miss Daisy Lee Hart, Stenographer

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J. E. Michael, Ass't Agronomist

FORESTRY

H. P. Hagge, Forester
L. B. Hairr, Ass't Agricultural Aide

Directing personnel for the ECW Camp at Polkton is as follows:

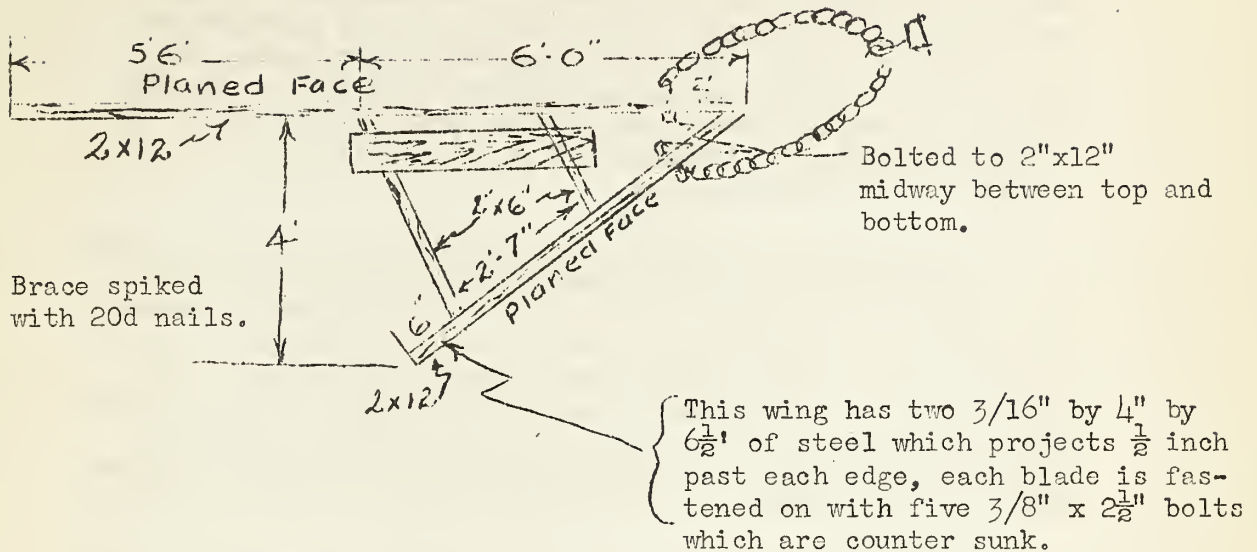
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R. B. Stamey, Engineer
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S. J. Crocker, "
C. S. Faw, "
C. A. Neal, "
C. W. Thompson, "
M. L. Ross, "
J. F. Martin "
B. W. Ingram, Mechanic
W. L. Teal, Clerk-Stenographer.

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Mr. William X. Hull, of the Department of Agriculture, Washington, D. C., was a recent visitor to our project.

By

Donald Christy



Reversible A Drag

"All terraces that are cultivated should be plowed once a year, and the soil should be thrown to the center. In this way the height of the terrace is maintained and the base broadened each year. Some washing is found to occur between terraces which tends to fill the channel. This deposit should be moved on to the terrace embankment." - U. S. D. A. Farmers' Bulletin 1669.

The value of your land has been greatly increased by terraces. Why not keep the value up to where it is now? It is an easy matter to use an A drag to keep them in good repair. A turn plow often is all that is necessary, but do not depend upon one plowing if the size of the terrace gradually dwindles. The A drag is a useful instrument for other farm work such as terrace construction and maintenance, farm roads, pushing in small gullies and building farm drainage ditches.

One year ago I was over a farm and noticed a small gully about one foot deep. I suggested to the farmer at that time that he should place some straw or brush in it and plow it in, then seed it down. He did not. The other day I was over the same field and the gully was four feet deep.

Get busy and fix those small gullies now.

When small gullies show up it indicates that the cropping system needs to be improved.

Remember a deed to the land won't hold the soil. The soil which is Gods heritage to man is for us to use, respect and pass on to posterity.

-J. E. Michael-

Before plant life was well established the great mountain peaks had been worn down by the combined action of water, wind and gravity (landslides) to only a fraction of their former height. The Ozark Mountains in Arkansas and Missouri were originally several times their present height. Some of the younger mountains, as the Rockies, are still barren of vegetation in large areas and are wearing away at a comparatively rapid rate.

Now just what would have happened on old Mother Earth if a wise Providence had not established plant life on her? Why you know the answer. In the first place we would not be here, and no doubt by this time the continued erosive action of the rainfall water would have carried all the soil that formed to lower levels until the whole earth would be covered by a layer of water. We can safely state that plant life alone is responsible for arresting the enormous rate at which the earth was eroding and being transported to lower levels.

And so the use of trees, grass and thick-growing crops of all kinds is Nature's plan for stabilizing the earth's outer crust, or in other words to hold the soil where it now is. The clean cultivation of land is a direct violation of this basic law of nature already mentioned, yet it is an obvious fact that we must till some of the ground to produce the bulk of the food and fiber crops that are demanded by the steadily increasing population of the earth, and the problem in farming is to make the best compromise possible with Nature in order to make a more intensive use of the soil, yet maintaining it in a permanently productive state. The practices of all good farmers and things that the Soil Conservation Service are advocating and attempting to demonstrate on its various projects are all means to this end, that is holding the soil to its present location and not letting it slip off down into some lowland and eventually to the sea. This practice on sloping land (which includes 80-85% of the farming lands of the United States) is to keep the ground covered as much of the time as is possible by thick-growing crops of trees, pastures, hay crops, winter cover crops of the clovers and lespedezas, and the increased use of the small grain crops, especially barley and oats to replace part of our corn acreage. Strip cropping is practical and effective in lots of situations and will find its place on our farms.

Good terraces are an important aid in minimizing land erosion. They divide the land into shorter slopes not allowing the water to get such a good running start downhill during heavy rains, giving more of it a chance to be absorbed and moving the surplus off the land at a slow rate of speed. Terraces also encourage contour cultivation, which, as you know, is plowing and running the rows with the terraces.

Every farmer living in the Piedmont section, or wherever there is hilly or sloping land, would profit by coming down to Anson County to see how the farmers here run their rows on the contour around a hillside. They have been following this method a long time and have become highly skilled in the practice, and when properly done, it has proven to a valuable aid in preventing soil washing.

Mother Nature, like all good mothers, abhors conspicuous nakedness (or nudism as the moderists term it) and does not allow, for long, any part of the earth to remain barren or exposed, but, gently covers her with a mantel of vegetation, when given the opportunity

Every barren, naked piece of ground, every muddy stream carrying its load of soil to fill our city and power reservoirs, every dust cloud blowing from our highways and fields should challenge us to do something about land barrenness. If we are farming, to study our erosion problems as concerning our land; if we are connected with the county or state highway departments, we should be interested in the one hundred and fifty to two hundred thousand acres of land in North Carolina roads that are exposed the year round to wind and water erosion. Or if we live in a city or town, we should be interested in the bare spots also; the back lots, embankments, soil streets, our gardens and playgrounds.

Nature has provided plants that will grow under a wide range of conditions of shade and sunlight, drought and excess moisture, heat and cold, acid and alkaline soils and the responsibility is ours to choose plants to suit the particular situation of barren soil to be covered.

Everyone, whether they live in the city or country, is affected by the consequence of man-caused erosion, so everyone has a responsibility not only in creating any condition that leaves a portion of the earth's surface bare, but to use every opportunity to do their part in remedying the situation of soil barrenness.

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Uncontrolled erosion may be thought of as a stern judge who has, upon evidence of careless and wasteful land use, condemned our productive soils to a slow death. - - Shall we sit idly by and see this death sentence carried out, or shall we, while there is yet time, appeal to the higher court of Soil Conservation, offering, as new evidence, a program of proper land use? It's up to us. The verdict is certain to be a just one, entirely in accordance with the evidence offered.

Reforestation



A FOREST TREE PLANTATION

Discussion occasionally arises with the use of the word "plantation" for a small tract of land planted to trees. Foresters have used the word for years and according to Webster's dictionary the following definitions are given for the word "Plantation". (1) A place planted with trees, (2) A cultivated estate for cotton, sugar, etc. The word will appear on sign boards erected where trees were planted and if a farmer has a place planted in Black Locust, Pine or any other species of trees even if it is only $\frac{1}{4}$ of an acre, it is called a Black Locust plantation, Pine plantation or mixed plantation.

The Forestry Department has numbered, mapped and recorded every plantation and all the information pertaining to every plantation is in the Forestry Department files. The farmers are welcome to copies of our planting record on their farms and if they will call at the office we will explain ways to keep accurate records on their forest tree plantations.

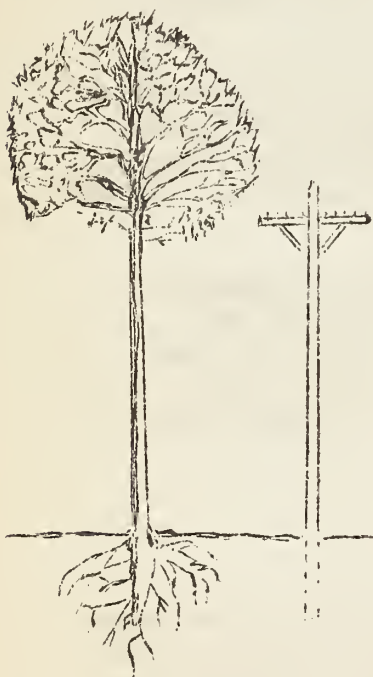
LOBLOLLY PINE (Pinus taeda L.)

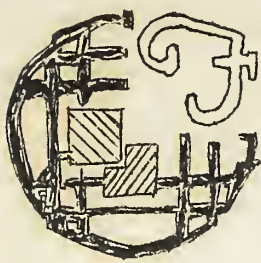
The most Common and Important Tree Of The Brown Creek Watershed.

Loblolly pine is one of four important southern yellow pines. Frequently known as "old Field Pine", it extends over the coastal plain and lower Piedmont sections from southern Delaware, south and west into the river valleys of eastern Texas and southern Arkansas. This pine is often called "old field pine" or Loblollics.

This pine is the most important forest tree on the Brown Creek Area and occupies practically 70% of its forest land. While no separate figures are available, loblolly is the most important of the four southern pines and makes a considerable part of the annual cut of "yellow pine", which totaled 3,068,898,000 board feet in 1932 and over 7,000,000,000 feet in 1930. The estimate stand of all southern yellow pine, loblolly, shortleaf, slash and long leaf, in 1932 was 118,132,000,000 board feet. A well stocked acre of loblolly will produce from 300 to nearly a 1,000 board feet of saw timber yearly. The production depends, as with other crops, upon the character of the soil and the protection from fire, grazing and pests. Individual stands are known to average 1,800 board

feet a year on each acre and in 32 years were ready for harvest. On fair growing sites to good growing sites 30,000 to 50,000 board feet of timber is a reasonable yield if the stand is well protected and managed. Loblolly pine grows faster over long periods than any other southern pine.





FORESTRY NEWS

By

Harold P. Hays
Forester

Farm Woodland Management

A plan to show by practical demonstrations why a forest tract should be handled as a crop.

The farm woodland improvement cutting demonstrations on the Brown Creek Area has created a great amount of attention and everyone has voiced their approval. The program has a number of benefits. (1) All farmers interested had an opportunity to receive instructions in improved methods of growing and utilizing a timber crop. (2) The improvement cutting demonstrations made a desirable source of fuel wood for the E. C. W. Camp. (3) Brush, poles, logs and stakes were available for gully and terrace outlet structures. (4) C. C. C. enrollees and people living in the region had an opportunity to see how woodland tracts should be improved. The improvement cutting plots were small but large enough to demonstrate forest stand improvement in a definite timber type. The demonstration plots were selected in all types of woodlands namely, Pure Loblolly Pine type, Shortleaf Pine type, Bottom land - hardwood type, and Pine - hardwood type. The plots were usually established along highways and roads and always on cooperators' farms where the farmers were interested and willing to allow 50% of the cut timber to be consumed by the E. C. W. Camp. They were always selected where the woodland needed improvement.

Every woodland has its problems but as a rule a few outstanding factors will promote proper management. The main factors that must be kept in mind are (1) Rapidity of growth, (2) Quality of the wood. (3) Reproductive ability of the trees for the existing soil and exposure. (4) Freedom from injury by wind, attack from insects and fungi. (5) Suitability of the timber for local market. When a woodland receives improvement treatment the brush should be lopped and scattered or may be removed and placed in gullies to prevent immediate erosion. Shrubs need not be cut or even grape vines unless the vines are preventing the growth of thrifty trees. All the berry producing shrubs and trees should be left for game food. Dense growth of brush on the edges of woodlands is beneficial, for it prevents wind sweep thru the woods and this low growth of shrubs gives wildlife food and cover. Farm woodland management does not mean that the farm woodlot should look like a city park or a picnic ground.

If any Soil Conservation Service cooperator wants to receive the services of the Forestry Department in a direct advisory capacity they should contact any member of the Service or come to the office at any time.

The Forestry Department will appreciate the opportunity to help solve the farmer's woodland management problems.

PROPER METHOD TO USE FOR THE REMOVAL OF LARGE LIMBS

Occasionally when caring for trees it becomes necessary to remove large limbs, care should be taken in this case to protect the tree from the mechanical injury and possibility of decay. The diagrams show the proper way to remove the large limbs and this suggestion should be carefully followed. The wound or exposed portion of a tree should be kept covered



Correct order
of cuts



Injurious effect of
improper cutting



Effect of
cutting at 1.

with creosote or asphalt paint to prevent decay. If more information is desired on this subject, Farmer's Bulletin No. 1178 may be obtained by writing, Division of Publications U. S. D. A., Washington, D. C.

The pruning of evergreens (pines and cone-bearing trees) is not as common as in broadleaf species. The root system of small trees is more compact and greater care is usually exercised to avoid root loss. If pruning is necessary to balance the crown with the roots, only the tips of the branches should be removed. If more than one leader is forming, the best one should be retained and the other cut back. When evergreens are transplanted 10 to 20 per cent of the length of the longer branches may be cut back thereby reducing the shock of their transplanting. An entire limb should never be cut from an evergreen tree unless an injury occurs near the trunk, in which case it should be cut close.

TREES TO PLANT FOR STREET AND ORNAMENTAL PURPOSES.

Native trees are often to be preferred for the reason that they are known to flourish under the soil and climatic conditions of the region. Longlived species, tough species that will not easily break or drop branches in high winds, and disease resistant trees, and those free from insect nests are to be sought. Trees that sprout from roots, such as poplar and locust, have disagreeable odors, such as ailanthus and china-berry; or are untidy or lose their leaves early, are in most cases to be avoided.

The species included in the following list are generally hardy in this region and species that may be used around the farm houses, streets, roadsides and for oriental planting. Compared with the whole number of trees used for oriental planting, the number of kinds used for street planting is very small. The typical street trees and trees for roadside planting in this region are the willow oaks and the water oaks, the former a valuable strength tree, the latter good when young but comparatively short lived with no advantage over the willow oak. Other good trees are the white oak, red oak, Southern oak, Spanish oak, post oak, laurel, Darlington, and pin oaks, tulip, (yellow poplar) sweet gum, sycamore, London plane, American elm, Chinese Elm, Black walnut, hickories, evergreen magnolia, holly red bud, dogwood, basswood, loblolly pine, slash pine, longleaf pine, and shortleaf pine.

SOILS DEPARTMENT
- R. C. Pleasants. -

Dominant Soils in Brown Creek Watershed Area.

The Alamance Soils

DESCRIPTION: Three types of the alamance series are represented in this area. These are alamance silt loam, slate loam, and gravelly silt loam. The surface soil in these types is gray in color while the subsoil is gray to light yellow. The surface soil of alamance silt loam is a light gray, floury silt loam, passing at 3 to five inches into a pale yellow silt loam which extends to a depth of 8 to 10 inches. The subsoil is a light yellow, compact, brittle silty clay. In dry weather the surface soil compacts on account of its low content of organic matter and its silty texture. The alamance gravelly silt loam differs from the silt loam in its high content of slate gravel in the surface soil. The subsoil is the same as for the silt loam. The slate loam type, locally referred to as "slate land", differs from the gravelly type in that the slate fragments on the surface are larger and the depth to bed rock is shallower. Very little silt loam material can be found associated with the slate fragments on this type.

DERIVATION: This series of soil is derived from the disintegration of the fine grained bluish slates.

OCCURRENCE: In this area the alamance series is the predominating soil from the slate rock and is found chiefly throughout the slate belt.

TOPOGRAPHY: Is undulating to rolling, the slate loam type being on the steeper slopes.

FERTILITY: The alamance soils are of moderate or rather low productivity, and crops grow slowly on them. This soil is capable of being greatly improved by deeper plowing, incorporation of organic matter, the growing of legumes in rotation with other crops and by the application of manure and commercial fertilizers. Cotton seems to be subject to rust on this soil, especially following a legume crop. This can be greatly reduced by a heavier application of potash.

CROP ADAPTATION: This soil is best suited to lespedeza, wheat and grass.

DEGREE OF EROSIVENESS: The alamance soils are susceptible to sheet washing and slow gullyng. The silt loam type is more susceptible to erosion than the gravelly and slate loam type. This difference is due to the slate fragments on the surface which act as a protection.

CONTROL MEASURES: Erosion on the alamance silt loam and gravelly silt loam can be controlled by broad and narrow strip-cropping, terracing, contour tillage, rotations and winter cover crops. Due to the high content of slate fragments and shallow depth to bed rock, the alamance slate loam does not lend itself to terracing.

WILDLIFE CONSERVATION DEPARTMENT

Wildlife Conservation - Its Scope and Meaning.

Forney A. Rankin

Among other things which have been brought about by the depression is more honest consideration for the conservation of our natural resources. Especially is the conservation of soils, wild animals and plants receiving considerable attention.

Until a few generations ago many people thought the supply of wild game and forests was unlimited. Forests were removed and the lumbermen followed and removed practically all marketable timber from their holdings. This condition was brought about in part by our system of taxation. More intensive as well as extensive agricultural practices were forced into operation.

All of these operations have had a profound influence on wild animals. In the pioneering days few people considered more than the edible and fur bearing animals. During those days more than enough game and fur bearing animals existed for everybody and no one had any interest in them except to devise methods whereby they could be captured with less effort.

The methods of destroying our forests were early deplored because the final result was more apparent. The alarming decrease in many forms of wild animals was slow to receive consideration. It has been too slow in many cases. After reading about the killing of car loads of passenger pigeons in Michigan and elsewhere, it might be easy to determine why these birds have entirely passed out of existence. The last heath hen has likewise ceased to live. Others have perished, and still others are in danger at the present time.

There has been a great shrinkage in nearly all forms of wild animals. As the game animals became less plentiful a little concern for them arose. While formerly they were hunted almost entirely for food they are now considered more in the light of sport. The supply does not even closely approach the demand. In looking for a reason for the decrease man has blamed everything, even including his neighbor, but never himself. It was easy to blame natural enemies, but man never wanted to include himself in that category.

Since there was a great supply of all forms of wild animals on this continent before white man came it would seem more logical that he take full responsibility for any decrease.

"Other than natural elements," says Ross O. Stevens, head of the Wildlife Department of the Soil Conservation Service, "a large part of the changes in wild animal populations might be attributed to two factors: (1) the ever increasing number of people who kill (2) the changes which have

come about in environments. It is easy to see how the first might decrease the supply. In many instances the gun, the steel trap and the dead-fall have been major factors in the reduction. However, in all fairness to the hunter, it should be stated that this has sometimes been overemphasized. At present hunting and trapping are taking more than a just portion of the annual increase."

"Men can be more justly criticized," Mr. Stevens continues, "for the changes he has brought about in environments and natural habitats. All operations dealing with the land and plants thereon influence the native wild animals. As a rule these influences have been detrimental. Homes and nesting places have been destroyed. Food and cover have been materially reduced and the interspersation of these basic requirements has been such that a large part of the land is not producing a maximum number of animals.

"In many instances man's operations have made conditons more suitable for undesirable species. Many species of mice and rats have had new homes created. Insects have responded very readily to suitable manmade environments. These in turn have made more suitable the chances for reproduction and survival of many larger flesh eating animals. And thus, by destroying environments suitable for our desirable animals, by creating environments more favorable for undesirable animals and by ruthlessly reducing the number of natural enemies of undesirable animals, in many cases man has in large measure brought about the present reduced supply of beneficial animals.

"Wildlife conservation means the management and development of all plants and animals on the areas under consideration so that maximum values will be realized therefrom. In many places where game animals have become scarce, efforts have been made to increase the supply. In nearly all cases only the species of game animals desired and their natural enemies have been considered. These have been attempts at game management. Nearly, all such attempts, sooner or later, have run into snags. It is being found that to manage an area properly all animals, from those composed of one cell through the insects, amphibians, reptiles, fish, birds, and mammals, must be considered. Game management is rapidly giving way to wildlife conservation."

It is this broad viewpoint which is being taken by the wildlife conservation department of the Soil Conservation Service. While we are giving considerable attention to the bobwhite quail and other game animals we are not overlooking the results our work might have on other species. In general, the song and insect eating birds have been gradually decreasing. The Soil Conservation Service is anxious to change this condition and make it possible for the birds to more successfully reproduce themselves and to more effectively do their part in controlling insects and other harmful animals.

The field of wildlife conservation is relatively new. It is very interesting and offers no end to study and research. All plants and animals of an area must be taken into consideration if maximum benefits are to be realized. There should be a definite understanding between game management and wildlife conservation.

U. S. Department of Agriculture
Soil Conservation Service
Wadesboro, N. C.

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